

THE PURDUE LANDSCAPE REPORT

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Volutella Blight and Dieback of Boxwood

(Tom Creswell, creswell@purdue.edu)

One of the most common diseases found on boxwoods is Volutella blight and dieback, caused by the fungi *Pseudonectria foliicola* and *P. buxi*. Both fungi are considered weak pathogens, always around but not causing much damage until plants are injured or stressed, rarely infecting otherwise healthy plants. Volutella blight alone usually doesn't kill boxwoods, but loss of branches can severely affect symmetry and ornamental value. A previous PLR article discusses [Volutella blight on pachysandra](#).



Figure 1. Boxwood showing stunting and gray green color typical of early stages of Volutella dieback.



Figure 2. Boxwood with Volutella dieback.



Figure 3. Dead boxwood stems with a tan to straw color are often associated with Volutella dieback.

Symptoms and signs:

During the growing season, infected branches may show stunted growth that later turns gray-green (Fig. 1) and usually dies by fall or winter (Fig. 2), becoming light tan or straw colored in spring (Fig. 3). A closer examination of stems may show bark splitting (Fig. 4) and/or sunken cankers at the soil line or in the crotches of branches where dead leaves accumulate. Wood under the sunken canker is usually blackened and the bark on blighted stems often becomes loose and falls away, especially on larger branches. The fungus produces clusters of fungal spores which are pink to cream-colored on lower leaf surfaces (Fig 5.). On blighted stems, signs of the fungus appear as cushions of small, salmon-colored spore masses that erupt through the epidermis (Fig. 6). Winter injury causes foliar symptoms similar to those caused by Volutella

blight but without signs of fungal infection, and Volutella infection often follows winter or frost injury, leading to confusion about diagnosis. If dieback or bronzing is caused by winter injury alone, the plant should produce new healthy leaves later in spring and eventually hide the damaged leaves.



Figure 4. Splitting bark on a boxwood stem due to Volutella dieback and/or winter injury.



Figure 5. Boxwood leaf showing sporulation of a Pseudonecrotia sp.



Figure 6. Close view of Pseudonecrotia sp. sporulation on a boxwood stem.

- Choose a well-drained planting site
- Maintain plant vigor with moderate fertilization, taking care to avoid fertilizing after mid-summer to ensure good winter dormancy
- Irrigate as needed during dry periods
- Prune out infected branches back to healthy tissue and destroy all pruned material
- Fungicides are not recommended for the control of this disease in the landscape
- There are no resistant boxwoods available.

Other Boxwood Diseases:

Be aware that other disease problems, such as Phytophthora root rot or nematodes, can also cause loss of foliage and dieback symptoms on boxwood. Boxwood leaves that die as a result of Volutella, various root diseases or environmental stresses are frequently colonized by the fungus Macrophoma. This fungus produces numerous black fruiting bodies, which can be seen as dark specks on dead leaves. It is a secondary colonizer of dead leaves and its presence indicates that the plant is stressed by some other factor.

Concerned about possible boxwood blight? See our publication to learn more:

<http://www.extension.purdue.edu/extmedia/BP/BP-203-W.pdf>

Trees in Peril

(Lindsey Purcell, lapurcel@purdue.edu)

In general, most people love trees. Whether in our backyards, parks, or lawn strips, we understand the value of trees and the enormous benefits they provide for us every day. Air quality enhancement, water protection is especially important to Hoosiers. According to recent reports, Indiana ranks 46th in air quality and 39th in water quality. Trees can help improve those numbers as one of the best biological machines! Other benefits include energy conservation, wildlife habitat, better aesthetics, and a sense of community – these are all values that trees can give.



Land clearing without permits and oversight can be a major threat to overall urban canopy.

So, for many of us, we are somewhat disheartened when we realize that not all people view trees with the same enthusiasm or

Management:

support. Some see trees as a “nuisance” – sources of leaves and needles or shade to “spoil” a perfect lawn. Some see trees as “interfering” with their property, or to develop a property for a new home or other building, or to widen a road.

The dilemma is that while all trees live on “someone’s property (a municipality, utility company easement or individual), the benefits that they provide do not recognize property boundaries. In other words, your tree, your neighbors’ tree, your neighborhood park’s tree, or your urban forest are all affecting everyone’s life in many ways. So, when someone proposes cutting them down people can get upset and feel compelled to take action.

That is where city foresters and non-profit organizations who focus on managing public trees can help. They are there to help with questions and issues regarding imperiled trees. They encourage anyone who seeks to protect trees in their community to support those organizations and learn more about programs that improve community trees.



The city forester or other government official in charge of public trees serve to protect our community forest.

Steps in Tree Protection

There are some basic steps in the protection of trees, most of which involves your local resources.

Step 1

There are several basic tools that every municipality should have in place to protect its trees. These include:

- Implementing the best management practices for urban forests
- Formulating a strategic plan for the management of the urban forest
- Administration of a tree policy or ordinance
- Mandate permits for any work to be completed on public trees
- Preparing a registry of heritage trees
- Ensuring that qualified personnel be in place for oversight of tree protection laws
- An informed tree board or committee composed of stakeholders who help with protecting and enhancing the

urban forest.

If your municipality does not have these tools in place you should work with your local university extension specialist or contact an ISA Certified Arborist to find more resources. Additionally, the Society of Municipal Arborists can provide resources on urban tree management.

Step 2

Get to know your municipal and elected officials to ensure prompt action when tree work is not implemented according to best practices, tree ordinance violations are identified, or work is not properly permitted according to local laws.

Step 3



County GIS maps can assist with determining ownership of trees.

Be informed on the situation before initiating any action regarding tree issues:

- Establish ownership of the tree; who’s tree is it? Check local GIS resources.
- Is it against your community or city tree policy? Check for permits as required.
- Does it make arboricultural (tree) sense? Consider if there is a nuisance issue or risk concern that may not be identified or overlooked.
- Communicate with the tree owner or manager to determine if the assessment and mitigation being implemented is according to best management practices?

It is important that we all work to protect and enhance our urban forests and community trees by recognizing the resources available to us. Trees in our cities are critical to our quality of life and as stewards of our environment, we must be vigilant for the many issues that imperil our community trees. For more information visit:

Trees Are Good!

Indiana Arborist Association

Society of Municipal Arborists

The Purdue Education Store

Taphrina Leaf Curl on Ornamental Flowering Peaches and Nectarines

(Gail E. Ruhl, ruhlg@purdue.edu)

To effectively control Taphrina leaf curl fungicides must be applied before bud swell.

If you remember seeing red, curled, distorted, leaves on *Prunus* spp. last year (Figs 1,2) and wondered what might have caused this symptom, the answer is most likely Taphrina leaf curl. Taphrina is a **fungal disease** that survives in bark and bud scales and infects peaches and nectarines as well as other ornamental flowering species of *Prunus*.

The symptoms of Taphrina leaf curl disease are very distinctive (Figure 1) and definitely noticeable when present in *Prunus* spp. Infected leaves are severely puckered, distorted, thickened and reddish-to purple in color. (Figure 2) Premature leaf drop may also occur.



Figure 1. Symptoms of Taphrina leaf curl on peach tree leaves in early Spring



Figure 2. Distinctive leaf distortion and pink color caused by Taphrina leaf curl

A single, thorough, **preventative fungicide application is recommended during dormancy**. Best control is achieved by applying fungicides in late autumn at leaf fall. If you failed to protect trees with a fall application, you may also control this fungal disease by applying protective fungicides **prior to bud swell in early spring before green leaf tips are first visible**.

Several fungicides are recommended for dormant applications. Check the [Midwest Fruit Pest Management Guide](#) for the most recent recommendations. Read and follow all label instructions to insure safety and maximum effectiveness.

If temperatures in your area have been such that visible bud swell has already occurred in *Prunus* spp., making it too late for a dormant application of fungicide then the recommended management for this year is to promote tree vitality through pruning, fertilization and watering.

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Editor: Kyle Daniel | Department of Horticulture and Landscape Architecture, 625 Agriculture Mall Dr., West Lafayette, IN 47907